

three inches = one foot
one and one half inches = one foot
one inch = one foot
three quarters inch = one foot
one half inch = one foot
three eighths inch = one foot
one quarter inch = one foot
one eighth inch = one foot



REPLACE HEAT PUMPS AND OTHER A/C UNITS AT FTD

DEPARTMENT OF VETERANS AFFAIRS MEDICAL CENTER
1000 FT. THOMAS AVE.
FT. THOMAS, KENTUCKY 41075



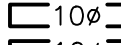
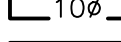
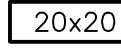
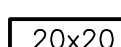
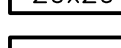

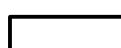


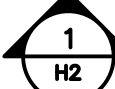







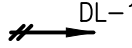
VICINITY MAP
SCALE: NTS



VA Project No: 539-13-109
Firm License: 01528

100% CONSTRUCTION DOCUMENTS 12/14/2012 Date		CONSULTANTS:		ARCHITECT/ENGINEERS: Mechanical Electrical Commissioning Technology Nationally Recognized Leader in Sustainability / LEED 1400 W Dorothy Lane, Dayton OH 45409-1310 Ph: 937-224-0861 Fax: 937-224-5777 www.heapy.com PROJECT NO. 2012-04031 FIRM LICENSE: 01528	Drawing Title COVER SHEET	Approved Project Director	Project Title CVAMC REPLACE HEAT PUMPS AND OTHER A/C UNITS AT FTD	Location FT. THOMAS KY	Project Number 539-13-109	Building Number 64	Drawing Number	Dwg. of 8	Office of Construction and Facilities Management Department of Veterans Affairs

ABBREVIATIONS

 TOP: 8'-5"  BOP: 7'-7"  20x20  TOD: 8'-10"  BOD: 7'-2"  TOE: 3'-0"  BOE: 0'-6"	APPROXIMATE DIMENSION ABOVE FINISHED FLOOR TO ITEM, UNLESS NOTED OTHERWISE.
 ②	RISER OR STACK NUMBER
	DETAIL: B = DETAIL DESIGNATION. H2 = SHEET WHERE DETAIL IS LOCATED.
	SECTION: 1 = SECTION DESIGNATION. H2 = SHEET WHERE SECTION IS LOCATED.
	FIRE SUPPRESSION HAZARD CLASSIFICATION AND HAZARD CLASSIFICATION GROUP
 H1 OR H1	EQUIPMENT REFERENCE. LETTER DESIGNATION VARIES. REFER TO SCHEDULES.
A1	EQUIPMENT, DEVICE, OR PLUMBING FIXTURE MARK. LETTER DESIGNATION VARIES. REFER TO SCHEDULES.
	CONNECT TO EXISTING
 3	PLAN NOTE. APPLIES ONLY TO THE SHEET WHICH IT IS SHOWN UNLESS NOTED OTHERWISE.
 3	DETAIL NOTE. APPLIES ONLY TO THE ASSOCIATED DETAIL.
 AT	"UP TO" SYMBOL (ITEM ON FLOOR ABOVE)
 UC	1" DOOR UNDERCUT BY GENERAL CONTRACTOR
 DL-1	DOOR LOUVER BY GENERAL CONTRACTOR. 1 = SQUARE FEET OF LOUVER.

VALVES AND FITTINGS

PLAN VIEW	DETAIL VIEW	DESCRIPTION
		CHECK VALVE
		SHUTOFF VALVE (REFER TO SPECIFICATIONS FOR REQUIRED TYPE BASED ON APPLICATIONS.)
		COMBINATION SHUTOFF AND BALANCING VALVE (REFER TO SPECIFICATIONS FOR REQUIRED TYPE BASED ON APPLICATIONS.)
		SHUTOFF VALVE (REFER TO SPECIFICATIONS FOR REQUIRED TYPE BASED ON APPLICATIONS.)
		CONCENTRIC PIPE REDUCER
		ECCENTRIC PIPE REDUCER
		BI-METALLIC STEAM TRAP AND DRIP ASSEMBLY
		THERMODYNAMIC STEAM TRAP AND DRIP ASSEMBLY
		INVERTED BUCKET STEAM TRAP AND DRIP ASSEMBLY
		FLOAT AND THERMOSTATIC STEAM TRAP AND DRIP ASSEMBLY
		THERMOSTATIC STEAM TRAP AND DRIP ASSEMBLY
		PRESSURE GAUGE
		TEMPERATURE GAUGE OR THERMOMETER
		GAUGE WITH COCK AND SIPHON LOOP
		UNION
		CLEANOUT
		STRAINER
		STRAINER WITH A BLOW DOWN VALVE AND HOSE CONNECTION
		DRAIN VALVE WITH HOSE END CONNECTION
		AUTOMATIC FLOW CONTROLLER WITH P/T PLUG IN AND OUT
		EXPANSION JOINT
		MANUAL AIR VENT
		AUTOMATIC AIR VENT
		PRESSURE REDUCING VALVE
		2 PORT AUTOMATIC CONTROL VALVE
		3 PORT AUTOMATIC CONTROL VALVE
		QUICK OPENING MANUAL VALVE
		SAFETY RELIEF VALVE. FOR HYDRONIC SYSTEMS PIPE DISCHARGE TO FLOOR, DRAIN UNLESS NOTED OTHERWISE. FOR STEAM SYSTEMS PIPE DISCHARGE TO OUTDOORS.
		VACUUM BREAKER
		NEEDLE VALVE
		PRESSURE AND TEMPERATURE TEST PLUG
		VACUUM GAUGE WITH STOP
		END CAP
		GLOBE VALVE
		SHUTOFF VALVE AND BOX
		SHUTOFF VALVE ON RISER

**ALL SYMBOLS OR ABBREVIATIONS MIGHT NOT
NECESSARILY BE USED ON THIS PROJECT.**

DWG	DESCRIPTION
64-H1	LEGEND, INDEX & ABBREVIATIONS
61-H2	SCHEDULES
64-H3	SECTIONS & DETAILS
64-H4	BASEMENT MECHANICAL PLAN - REMOVALS
64-H5	BASEMENT MECHANICAL PLAN

Office of
Construction
and Facilities
Management

 Department of
Veterans Affairs

NOTES:
1. COTR SHALL BE PRESENT DURING PRESSURE RATING TESTING.

NOTES:

1. PLUG-IN POWER CONNECTION
2. HARD WIRED POWER CONNECTION
3. PROVIDE WITH SUB-BASE KIT AND REMOTE THERMOSTAT AND OCCUPANCY SENSOR. MOUNT REMOTE SENSORS PER MFR'S RECOMMENDATIONS.
4. PROVIDE WITH HARD-WIRE KIT AND REMOTE THERMOSTAT AND OCCUPANCY SENSOR. MOUNT REMOTE SENSORS PER MFR'S RECOMMENDATIONS.
5. PROVIDE WITH CONDENSATE DRAIN KIT AND SLOPE TO EXTERIOR WALL TO DRAIN OUTSIDE.
6. PROVIDE HEAT PUMP MODEL PTAC WITH ELECTRIC HEAT
7. PROVIDE HEAT PUMP MODEL PTAC WITH/OUT ELECTRIC HEAT.

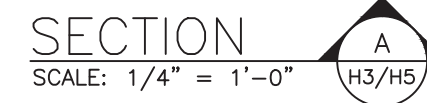
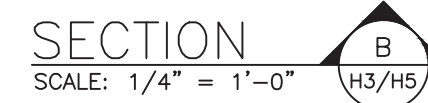
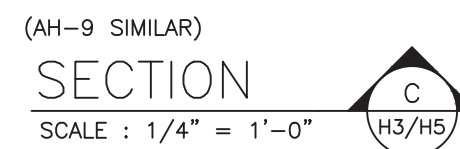
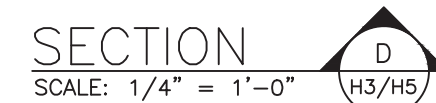
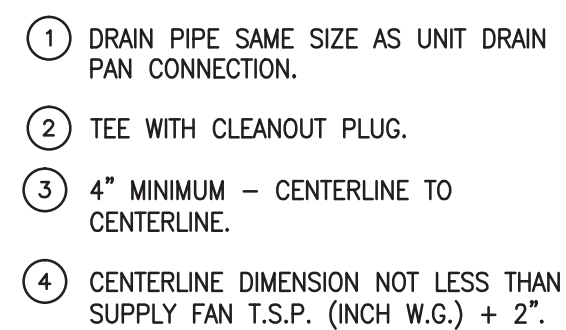
NOTES:

1. REPLACE ONLY INDOOR EVAPORATOR COIL, OUTDOOR CONDENSING UNIT, AND ASSOCIATED REFRIGERANT PIPING AS PART OF BASE BID. DON'T REPLACE THIS UNIT AS PART OF DEDUCT ALTERNATE 1.
2. REPLACE ONLY INDOOR EVAPORATOR COIL, OUTDOOR CONDENSING UNIT, AND ASSOCIATED REFRIGERANT PIPING. DON'T REPLACE THIS UNIT AS PART OF DEDUCT ALTERNATE 2.
3. REPLACE INDOOR AIR HANDLING UNIT, EVAPORATOR COIL, OUTDOOR CONDENSING UNIT AND ALL ASSOCIATED REFRIGERANT PIPING.
4. EVAPORATOR COIL IS INTEGRAL TO THE INDOOR UNIT AND REPLACED AS PART OF THE PACKAGED INDOOR UNIT REPLACEMENT.
5. EXISTING EQUIPMENT TO REMAIN, PROVIDED AS INFORMATION ONLY.
6. EVAPORATOR COIL PROVIDED AS PART OF PACKAGED UNIT.
7. DON'T REPLACE THIS UNIT AS PART OF DEDUCT ALTERNATE 1.
8. DON'T REPLACE THIS UNIT AS PART OF DEDUCT ALTERNATE 2.

GENERAL NOTES

1. THESE NOTES APPLY EQUALLY TO THE FULL SET OF DOCUMENTS.
2. INSULATE DUCTWORK AND PIPING WHERE EXISTING INSULATION HAS BEEN DAMAGED AND/OR REMOVED IN THE PERFORMANCE OF WORK IN THIS PROJECT.
3. THE CONTRACTORS SHALL REFER TO ALL SPECIFICATION SECTIONS AND THESE DRAWINGS FOR DETAILS OF BUILDING CONSTRUCTION TO ENSURE SPACE AND SATISFACTORY ARRANGEMENT FOR THEIR WORK. THE VARIOUS DRAWINGS COMPRISING THE SET ARE INTERDEPENDENT AND MUST BE USED JOINTLY AT ALL TIMES. EACH CONTRACTOR SHALL REFER TO THE GENERAL REQUIREMENTS OF THE CONTRACT. THE NOTES AND SYMBOLS INDICATED ON THE DRAWINGS ARE FOR THE GUIDANCE OF ALL TRADES INVOLVED IN THE PROJECT AND MUST BE FOLLOWED TO EXECUTE THE WORK AS INTENDED. IF DISCREPANCIES OCCUR, CONTACT THE PROJECT ENGINEER (COTR) THRU THE CONTRACTING OFFICE FOR CLARIFICATION BEFORE PROCEEDING.
4. IN ACCORDANCE WITH GENERALLY ACCEPTED CONSTRUCTION PRACTICES, THE CONTRACTOR WILL BE SOLELY AND COMPLETELY RESPONSIBLE FOR ALL CONDITIONS ON THE PROJECT SITE, INCLUDING SAFETY OF ALL PERSONS AND PROPERTY DURING PERFORMANCE OF THE WORK. THIS WILL APPLY CONTINUOUSLY AND NOT BE LIMITED TO NORMAL WORKING HOURS. SEE SPECIFICATIONS FOR MORE SPECIFIC DETAILS ON RESPONSIBILITIES.
5. ALL WORK MUST BE COORDINATED WITH THE CONTRACTING OFFICER AND PROJECT ENGINEER (COTR) TO MAINTAIN OPERATION OF THE EXISTING FACILITY.
6. EACH CONTRACTOR SHALL COORDINATE HIS WORK WITH THE WORK OF OTHERS. HE SHALL KEEP HIMSELF INFORMED OF THE PROGRESS AND DETAIL DEVELOPMENT OF THE WORK OF OTHERS AND SHALL BE RESPONSIBLE FOR COORDINATING AND EXPEDITING HIS WORK WITH OTHERS SO THAT THE PROGRESS OF THE TOTAL WORK SHALL BE KEPT ON SCHEDULE.
7. ALL WORK SHALL BE PERFORMED IN COMPLETE COMPLIANCE WITH ALL GOVERNING CODES AND STANDARDS.
8. EXISTING CONDITIONS SHOWN HAVE BEEN BASED UPON AVAILABLE DRAWING INFORMATION, AND MAY BE AT VARIANCE WITH ACTUAL WORK IN PLACE. THE CONTRACTOR SHALL TAKE ALL NECESSARY FIELD MEASUREMENTS AND FIELD VERIFY ALL CONDITIONS AFFECTING THE EXECUTION OF THE WORK. ANY DISCREPANCIES BETWEEN EXISTING CONDITIONS AND THE WORK SHOWN ON THE CONTRACT DOCUMENTS WHICH MAY IMPACT THE PROGRESS OF THE WORK SHALL BE BROUGHT TO THE ATTENTION OF THE CONTRACTING OFFICE BY WRITING FOR RESOLUTION BEFORE PROCEEDING WITH THE WORK.
9. EACH CONTRACTOR AND/OR TRADE, FITTING OR PLACING HIS WORK INTO OR ON THE WORK OF OTHERS DOES SO WITH THE UNDERSTANDING THAT THE INSTALLATION OF HIS WORK CONSTITUTES HIS ACCEPTANCE OF THE SUITABILITY OF THE WORK IN PLACE. IF THE WORK OF OTHERS IS NOT ACCEPTABLE, HE SHALL NOTIFY THE PROJECT ENGINEER (COTR) AND SUCH WORK SHALL BE CORRECTED. ANY NEW WORK INSTALLED IN UNSUITABLE EXISTING WORK SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR OR TRADE. INSTALLING THE NEW WORK SHALL BE FOR ADDITIONAL COMPENSATION FOR CORRECTING WORK INSTALLED IN UNSUITABLE EXISTING CONDITIONS WILL BE CONSIDERED.
10. FIRE-RATINGS OF EXISTING WALL ASSEMBLIES SHALL BE MAINTAINED. ALL PENETRATIONS THROUGH FIRE-RATED ASSEMBLIES SHALL BE PROTECTED WITH FIRE-STOPPING AS REQUIRED TO MAINTAIN THE FIRE-RATED FIRE-RATINGS. COORDINATE WITH ALL TRADES TO ENSURE FIRE-RATED PENETRATION REQUIREMENTS AND DETAILS ARE MET.
11. ANNUAL SPACE OF ALL PIPE, CONDUIT, DUCT & OTHER SIMILAR PENETRATIONS OF FIRE RATED ASSEMBLIES SHALL BE PRESTOPPED. IN ADDITION, PENETRATIONS THROUGH 4-HOUR RATED WALLS & FLOORS SHALL BE PRESTOPPED TO RETARD PASSAGE OF FIRE & SMOKE.
12. ALL PIPING, DUCTS, CONDUITS, ETC. IN FINISHED ROOMS, CORRIDORS, ETC. SHALL BE CONCEALED IN A FURRED CHASE OR ABOVE THE SUSPENDED CEILING.
13. THE FIRST FIGURE OF DUCT SIZE INDICATES DIMENSION OF FACE SHOWN OR INDICATED. DUCT SIZES ARE NET INSIDE DIMENSIONS.
14. ACCESS PANELS IN NON ACCESSIBLE SUSPENDED CEILINGS SHALL BE PROVIDED FOR ALL VALVES, TRAPS, DAMPERS, CLEANOUTS, FLOW METERS, CONTROLS, ETC.
15. TOTAL STATIC PRESSURE NOTED IN THE SCHEDULES INCLUDES DUCT SYSTEM, TERMINAL UNITS, FILTERS, COILS, ETC.
16. WHERE DUCTS OR PIPES ARE REMOVED THRU WALL THAT IS TO REMAIN, PATCH WALL OPENING TO MATCH EXISTING WHERE OPENING IS NOT RE-USED.
17. ALL PRESSURES LISTED ARE GAGE PRESSURE UNLESS OTHERWISE NOTED.
18. ALL CUTTING AND PATCHING REQUIRED FOR THIS PROJECT SHALL BE INCLUDED IN THE CONTRACT. REFINISH ANY SURFACE DISTURBED UNDER THIS WORK TO MATCH EXISTING.
19. IN GENERAL, KEEP DUCT AND PIPING MAINS NEXT TO UNDERSIDE OF STRUCTURE.
20. ANY REMOVED EQUIPMENT SHALL BE TURNED OVER TO THE VA. ITEMS NOT DESIRED BY THE VA SHALL BE REMOVED FROM THE PREMISES AND DISPOSED OF PROPERLY BY THE CONTRACTOR. RECYCLE ITEMS AND KEEP ALL OTHER SPECIFICATIONS.
21. REFER TO SPECIFICATIONS FOR ADDITIONAL INFORMATION.
22. THE CONTRACT DRAWINGS ARE NOT INTENDED TO SHOW EVERY VERTICAL OR HORIZONTAL OFFSET WHICH MAY BE NECESSARY TO COMPLETE THE SYSTEMS. COORDINATE WORK IN ADVANCE WITH ALL OTHER TRADES AND REPORT IMMEDIATELY AND DIFFICULTIES WHICH CAN BE ANTICIPATED.
23. FIELD VERIFY EXISTING CONDITIONS, INCLUDING DUCT, PIPE AND EQUIPMENT SIZES, SERVICES AND LOCATIONS PRIOR TO PERFORMING WORK.
24. ALL ABANDONED EXISTING PIPING, DUCTWORK, SUPPORTS, CONTROLS, ETC. SHALL BE REMOVED.
25. TERMINATE PIPING AND DUCTWORK ABOVE CEILINGS, ETC., IN CONCEALED SPACES. ALL CUTTING AND PATCHING SHALL MATCH EXISTING FINISHES.
26. WHERE CONTROL DEVICES ARE REMOVED, PNEUMATIC LINES SHALL BE REMOVED BACK TO MAIN AND CAPPED, AND CONTROL WIRING AND CONDUIT SHALL BE REMOVED BACK TO SOURCE.
27. ALL EXISTING DUCTWORK, PIPING, EQUIPMENT, CONTROLS, ETC. SHOWN DASHED SHALL BE REMOVED. THE MAJORITY OF WORK TO BE REMOVED IS SHOWN. REMOVE ALL INCIDENTAL ABANDONED DUCTWORK, PIPING, ETC. THAT MAY NOT BE SHOWN BUT IS ASSOCIATED WITH THE REMOVAL WORK.
28. ALL ITEMS THAT REQUIRE ACCESS, SUCH AS FOR OPERATING, CLEANING, SERVICING, MAINTENANCE, AND CALIBRATION, SHALL BE EASILY AND SAFELY ACCESSIBLE BY PERSONS STANDING AT FLOOR LEVEL OR STANDING ON PERMANENT PLATFORMS, WITHOUT THE USE OF PORTABLE LADDERS. EXAMPLES OF THESE ITEMS INCLUDE, BUT ARE NOT LIMITED TO ALL TYPES OF VALVES, FILTERS AND STRAINER, TRANSMITTERS, CONTROL DEVICES, ETC.
29. WHERE EXISTING HVAC UTILITIES IN SERVICE WILL BE DISRUPTED DURING THE CONSTRUCTION OF THIS PROJECT, THIS WORK SHALL BE PERFORMED ON WEEKENDS OR WEEK NIGHTS, IF REQUIRED BY THE PROJECT ENGINEER (COTR). DOWNTIME SHALL BE KEPT TO A MINIMUM, AND SHALL BE COORDINATED AND SCHEDULED WELL IN ADVANCE WITH THE PROJECT ENGINEER (COTR).
30. WHEN NEW SUPPLY AND RETURN AIR DUCTS ARE CONNECTED TO EXISTING DUCTWORK, CLEAN BOTH NEW AND EXISTING DUCTWORK BY MOPPING AND VACUUM CLEANING INSIDE AND OUTSIDE BEFORE OPERATION. PROVIDE EVIDENCE OF CLEANING TO COTR.
31. APPROXIMATE ELEVATIONS NOTED ARE TO THE CENTER OF THE PIPE/DUCT.
32. REFER TO ELECTRICAL DRAWINGS FOR VARIABLE SPEED MOTOR CONTROLLERS ASSOCIATED WITH MECHANICAL EQUIPMENT.
33. CONTRACTOR RESPONSIBILITIES ARE LISTED IN SPECIFICATION SECTION 23 09 23, SECTION 1.1.
34. LEAD-BASED PAINT IS KNOWN TO BE PRESENT ON THE EXTERIOR SIDE OF WINDOWS IN ROOM 018 & A108 WHERE UNITS ARE SCHEDULED TO BE REPLACED. THE CONTRACTOR MUST ENSURE COMPLIANCE WITH THE OSHA 1926.62 LEAD IN CONSTRUCTION STANDARD FOR WORKERS DISTURBING THE SUBSTRATE.
35. ASBESTOS IS SUSPECTED TO BE PRESENT IN THE ACM OF THE WINDOW PUTY, AS LONG AS THE ACM OF THE WINDOW PUTY IS NOT DISTURBED. DURING INSTALLATION OF THE HEAT PUMPS, THE ACM DOES NOT REQUIRE ABATEMENT. OTHERWISE, THE CONTRACTOR WILL NEED TO GET SPECIFICATIONS FROM THE CINCINNATI ANNUAL HYGIENE OFFICE ON HOW TO ABATE THE ACM IN THESE WINDOWS. IF CONTRACTOR CANNOT INSTALL PTAC UNIT WITHOUT DISTURBING THE ACM MATERIAL IN THE WINDOW PUTY, THE CONTRACTOR SHALL BE RESPONSIBLE FOR AND BEAR THE COST OF ABATEMENT AND WINDOW REPLACEMENT IF NECESSARY.

 Department of
Veterans Affairs



SUSPENDED UNIT
SCALE: NONE



A. EXISTING SINGLE ZONE AIR HANDLING UNIT WITH OUTSIDE AIR DAMPER; STEAM VALVE SHALL BE OPENED TO COOL, SUPPLYING CONDITIONED AIR TO THE KITCHEN/DINING ROOM.

B. AIR HANDLING SYSTEM START/STOP – NIGHT SETBACK – THE AIR HANDLING SYSTEM SHALL BE OPENED TO HEAT OR COOL (WHATEVER TEMPERATURE OCCUPIED/UNOCCUPIED 7-DAY-AND HOLIDAY OPERATION) WITH NEW THERMOSTAT CONTROLS. THE EXISTING THERMOSTAT SHALL REMAIN IN PLACE AND THE NEW THERMOSTATS SHALL FUNCTION AS SPECIFIED. DURING UNOCCUPIED MODE, THE AIR HANDLING SYSTEM SHALL BE CLOSED TO PREVENT WASTEFUL ENERGY USE. OUTSIDE AIR DAMPERS SHALL REMAIN CLOSED AND COOLING WILL NOT BE AVAILABLE. WHEN THE AIR HANDLING SYSTEM IS OPENED TO HEAT, THE OUTSIDE AIR DAMPER VALVES SHALL GO TO THE FULL OPEN POSITION WHEN THE SYSTEM IS OCCUPIED. THE CONTROLLED SPACE SHALL MAINTAIN A REDUCED SPACE TEMPERATURE TO 60 DEGREES F.

C. MORNING WARM-UP AND INITIAL START – SEQUENCE SHALL REMAIN AS EXISTING.

D. SAFETY: ALL EXISTING SENSITORS SHALL REMAIN AS EXISTING.

1. EXISTING LOW TEMPERATURE LIMIT CUTOFF "FREEZESTATS" – SEQUENCE SHALL REMAIN AS EXISTING.

2. EXISTING SMOKE DETECTORS – SMOKE DETECTORS SHALL REMAIN.

E. HEATING COIL VALVE – SEQUENCE SHALL REMAIN AS EXISTING.

F. DX COOLING COIL – WHEN THE ROOM TEMPERATURE RISES ABOVE SETPOINT, THE SOLENOID VALVES AND COMPRESSOR STEERING SHALL BE DEACTIVATED. SOLENOID VALVES SHALL BE SATURATED AND THEREAFTER, ON OFF TIME DELAYS BETWEEN STEPS, WHEN THE MINIMUM STEP OF DX COOLING REVERTED TO THE EXISTENT MAXIMUM SETPOINT. WHEN THE TEMPERATURE FALLS BELOW 55 DEGREES F, HOT GAS BY-PASS SHALL BE ENERGIZED, COORDINATE SOLENOID VALVES, CIRCUITING AND COMPRESSOR STOP INTERLOCK WITH EXISTENT MAXIMUM SETPOINT.

G. DX COOLING COIL SHALL BE LOCKED OUT WHEN IN HEATING MODE TO PREVENT ANTI-FLOODING SCENARIO.

[illegible]

A. NEW SINGLE ZONE AIR HANDLING UNIT WITH OUTSIDE AIR DAMPER, AND COOLING COIL, SUPPLYING CONDITIONED AIR TO THE CANTEN / CANTINA SALLE

B. AIR HANDLING SYSTEM START / STOP – NIGHT SCHEDULE – THE AIR HANDLING UNIT SHALL BE ABLE TO BE SEQUENCED FOR OPERATION DURING THE NIGHT PERIOD. THE UNIT SHALL BE OPERATIONAL DURING THE OCCUPIED MODE. THE TEMPERATURE CONTROLS SHALL FUNCTION AS USUAL. DURING UNOCCUPIED MODE, THE OUTSIDE AIR HANDLING UNIT SHALL BE OFF, THE OUTSIDE AIR DAMPERS SHALL REMAIN CLOSED, AND COOLING WILL NOT BE AVAILABLE.

C. MORNING WARM-UP AND INITIAL START – SEQUENCE SHALL REMAIN AS EXISTING.

D. COOL COILING COIL – WHEN THE ROOM TEMPERATURE RISES ABOVE SETPOINT, THE SOLENOID VALVE AND COMPRESSOR SHALL BE ENERGIZED. THE SATISFY SIGNAL FROM THE COILING COIL, OPENS THE TIME DELAY BETWEEN SETPOINTS TO PREVENT SHORT CYCLING OF THE COILING COIL. THE FIRST START OF THE COILING COIL, OPENS THE LIQUID LINE SOLENOID VALVES AND START CONDENSING UNIT. SECOND STAGE OF COILING COIL, OPENS THE GAS LINE SOLENOID VALVES AND INTERLOCKS WITH EQUIPMENT MANUFACTURER.

E. COILING COIL SHALL BE LOCKED OUT WHEN IN HEATING MODE TO PREVENT SIMULTANEOUS HEATING AND COOLING.

Drawing Title
SECTIONS + DETAILS

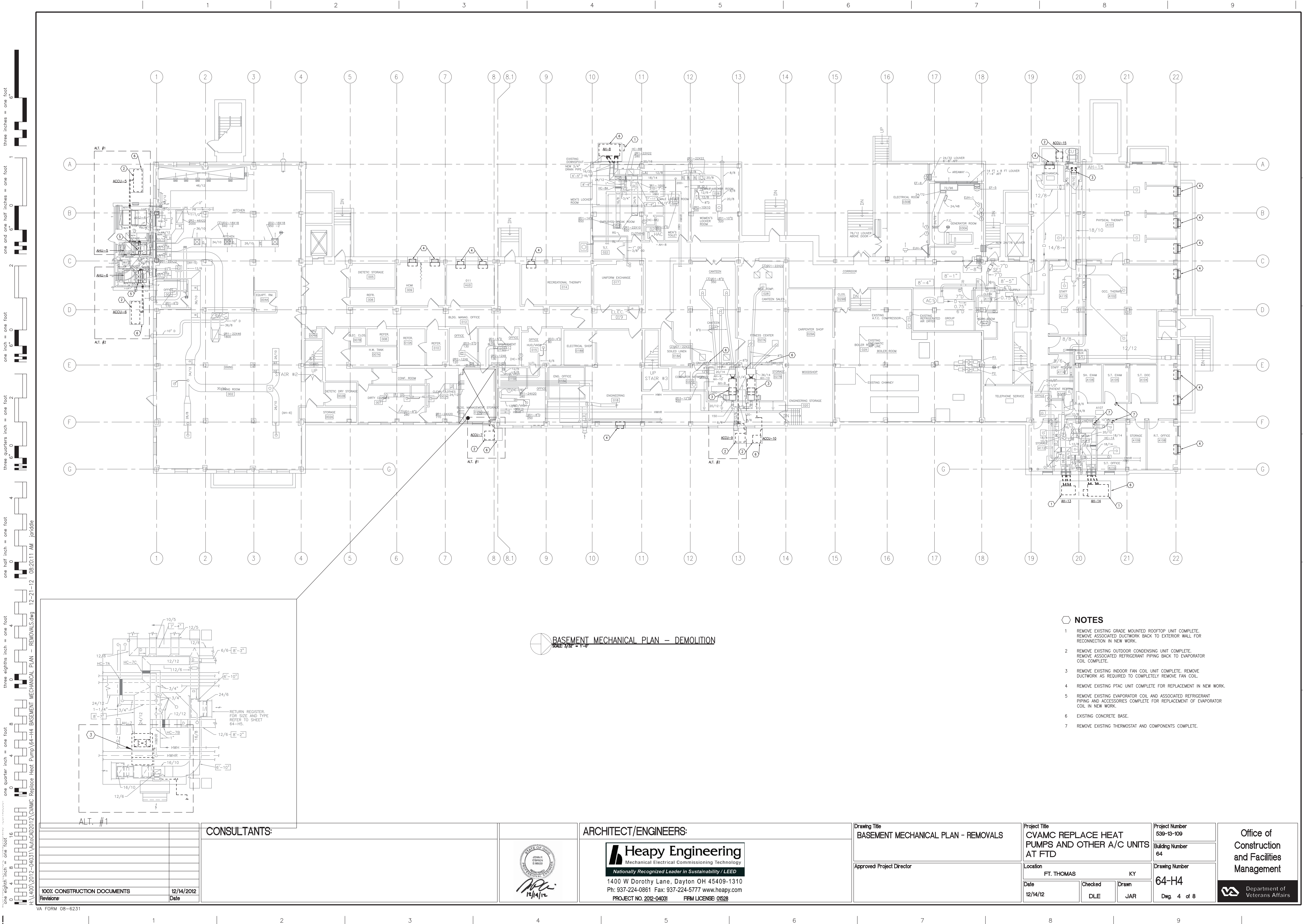
Approved: Project Director

Location	FT. THOMAS	KY
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64-H3

 Department of
Veterans Affairs

1400 W Dorothy Lane, Dayton OH 45409-1310
Ph: 937-224-0861 Fax: 937-224-5777 www.heapy.com
PROJECT NO. 2012-04031 FIRM LICENSE: 01528



BASEMENT MECHANICAL PLAN - DEMOLITION
SCALE: 3/8" = 1'-0"

NOTES

- 1 REMOVE EXISTING GRADE MOUNTED ROOFTOP UNIT COMPLETE. REMOVE ASSOCIATED DUCTWORK BACK TO EXTERIOR WALL FOR RECONNECTION IN NEW WORK.
- 2 REMOVE EXISTING OUTDOOR CONDENSING UNIT COMPLETE. REMOVE ASSOCIATED REFRIGERANT PIPING BACK TO EVAPORATOR COIL COMPLETE.
- 3 REMOVE EXISTING INDOOR FAN COIL UNIT COMPLETE. REMOVE DUCTWORK AS REQUIRED TO COMPLETELY REMOVE FAN COIL.
- 4 REMOVE EXISTING PTAC UNIT COMPLETE FOR REPLACEMENT IN NEW WORK.
- 5 REMOVE EXISTING EVAPORATOR COIL AND ASSOCIATED REFRIGERANT PIPING AND ACCESSORIES COMPLETE FOR REPLACEMENT OF EVAPORATOR COIL IN NEW WORK.
- 6 EXISTING CONCRETE BASE.
- 7 REMOVE EXISTING THERMOSTAT AND COMPONENTS COMPLETE.

CONSULTANTS:

ARCHITECT/ENGINEERS:

Heapy Engineering
Mechanical Electrical Commissioning Technology
Nationally Recognized Leader in Sustainability / LEED
1400 W Dorothy Lane, Dayton OH 45409-1310
Ph: 937-224-0861 Fax: 937-224-5777 www.heapy.com
PROJECT NO. 2012-04031 FIRM LICENSE: 01528

Drawing Title
BASEMENT MECHANICAL PLAN - REMOVALS

Approved Project Director

Project Title
CVAMC REPLACE HEAT PUMPS AND OTHER A/C UNITS AT FTD

Location
FT. THOMAS

KY

Date
12/14/12

Checked
DLE

Drawn
JAR

Project Number
539-13-109

Building Number
64










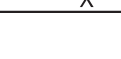
Drawing Number
64-H4

Dwg. 4 of 8











Office of
Construction
and Facilities
Management










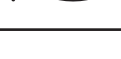




















TECHNOLOGY SYMBOLS

	CEILING MOUNTED WIRELESS ACCESS POINT WITH DATA DROP ABOVE CEILING. PROVIDE 20' COIL IN DATA CABLE TO FACILITATE RELOCATION OF WAP. WAP PROVIDED BY OWNER.
	CONDUIT SLEEVE / FIRE RATED SLEEVE ASSEMBLY THRU WALL. (1-2" SLEEVE UNLESS NOTED OTHERWISE).
	WALL MOUNTED VOICE/DATA OUTLET (18" MH UNLESS NOTED OTHERWISE). BOX WITH CONDUIT(S) TO ABOVE CORRIDOR CEILING. JACKS, FACEPLATE AND CABLE. REFER TO FACEPLATE DETAILS.
	WALL MOUNTED AV OUTLET (18" MH UNLESS NOTED OTHERWISE). BOX WITH CONDUITS TO ABOVE ACCESSIBLE CEILING. REFER TO FACEPLATE DETAILS. PROVIDE JACKS, FACEPLATE AND CABLING. SUBSCRIPT "X" INDICATES ALTERNATE CONFIGURATION.
	TELECOM BOX AND CONDUIT. REFER TO PLANS.
	WALL MOUNTED PHONE OUTLET (46" MH UNLESS NOTED OTHERWISE). BOX WITH CONDUIT TO ABOVE ACCESSIBLE CEILING. JACKS, FACEPLATE AND CABLE. REFER TO FACEPLATE DETAILS.
	WALL MOUNTED AV OUTLET (64" MH UNLESS NOTED OTHERWISE). BOX WITH CONDUIT. REFER TO FACEPLATE DETAILS. PROVIDE JACKS, FACEPLATE AND CABLING. SUBSCRIPT "X" INDICATES ALTERNATE CONFIGURATION.
	WALL MOUNTED AV OUTLET (44" MH UNLESS NOTED OTHERWISE). BOX WITH CONDUIT. REFER TO FACEPLATE DETAILS. PROVIDE JACKS, FACEPLATE AND CABLING. SUBSCRIPT "X" INDICATES ALTERNATE CONFIGURATION.
	CUSTOM OUTLET IN SURFACE RACEWAY. OUTLET JACKS, FACEPLATE AND CABLING.
	TECHNOLOGY FLOOR BOX. PROVIDE APPROPRIATE CONNECTOR PLATE AND HINGED COVER. "X" INDICATES OUTLET TYPE. SUBSCRIPT "X" INDICATES ALTERNATE CONFIGURATION. REFER TO FACEPLATE DETAILS.

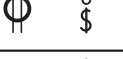
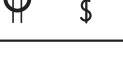









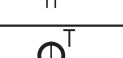





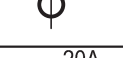
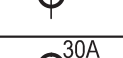
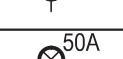

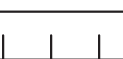



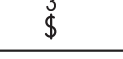
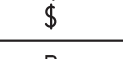
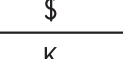
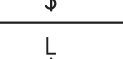
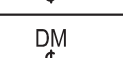



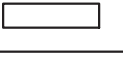
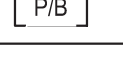
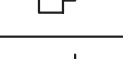
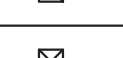



















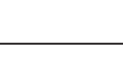





AV SYMBOLS

	SINGLE FACED. WALL MOUNTED CLOCK (102" MH UNLESS NOTED OTHERWISE). 12" DIAMETER FACE UNLESS SUBSCRIPT "15" FOR 15" DIAMETER FACE. SUBSCRIPT "W" INDICATES WIREGUARD.
	DOUBLE FACED. WALL MOUNTED CLOCK (102" MH UNLESS NOTED OTHERWISE). 12" DIAMETER FACE UNLESS SUBSCRIPT "15" FOR 15" DIAMETER FACE.
	FLAT PANEL DISPLAY WITH WALL MOUNTING HARDWARE (84" MH UNLESS NOTED OTHERWISE). 8" INDICATES NOMINAL SCREEN DIAGONAL SIZE.
	CEILING MOUNTED MANUAL PROJECTION SCREEN.
	WALL MOUNTED MANUAL PROJECTION SCREEN.
	CEILING MOUNTED PROJECTOR. SUBSCRIPT "X" INDICATES CONFIGURATION TYPE. REFER TO FACEPLATE DETAILS.
	CEILING MOUNTED PAGININTERCOM SYSTEM SPEAKER.
	HORN TYPE PAGININTERCOM SYSTEM SPEAKER (90" MH UNLESS NOTED OTHERWISE). 1-GANG BOX WITH 0.75" CONDUIT TO ABOVE ACCESSIBLE CEILING. GROMMETED FACEPLATE, SPEAKER, INSTALLATION AND WIRING.
	SURFACE MOUNTED PAGININTERCOM SPEAKER (90" MH UNLESS NOTED OTHERWISE). SUBSCRIPT "H" INDICATES HANGING CEILING SPEAKER. 1-GANG BOX WITH 0.75" CONDUIT TO ABOVE ACCESSIBLE CEILING. SPEAKER, INSTALLATION AND CABLING.
	PAGININTERCOM SYSTEM WALL MOUNTED SPEAKER VOLUME CONTROLLER (46" MH UNLESS NOTED OTHERWISE). 1-GANG BOX AND 0.75" CONDUIT TO ABOVE ACCESSIBLE CEILING. VOLUME CONTROLLER WITH FACEPLATE, INSTALLATION AND WIRING.

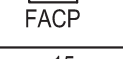

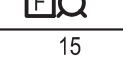
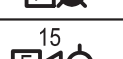
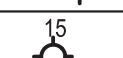




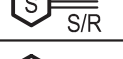
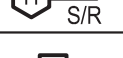








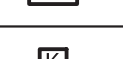



SECURITY SYMBOLS

	CCTV SYSTEM CEILING MOUNTED CAMERA. REFER TO CAMERA SCHEDULE FOR MOUNTING HEIGHT AND CAMERA SPECIFICATIONS. SUBSCRIPT "X" INDICATES ENTRY IN CAMERA SCHEDULE.
	PROVIDE INTERFACE FROM CARD ACCESS SYSTEM INTO ELEVATOR CONTROLLER INCLUDING ALL NECESSARY HARDWARE, PROGRAMMING AND CABLING AS COORDINATED WITH ELEVATOR CONTRACTOR.
	GLASS BREAK.
	DESK MOUNTED INTERCOM MASTER STATION.
	CEILING MOUNTED MOTION DETECTOR.
	DESK MOUNTED PUSH BUTTON FOR LOCAL ELECTRONIC DOOR RELEASE.
	DESK MOUNTED PANIC/DURESS BUTTON.
	CCTV SYSTEM WALL MOUNTED CAMERA (REFER TO CAMERA SCHEDULE FOR MOUNTING HEIGHT AND CAMERA SPECIFICATIONS). SUBSCRIPT "X" INDICATES ENTRY IN CAMERA SCHEDULE. 1-GANG BOX WITH 0.75" CONDUIT TO ABOVE ACCESSIBLE CEILING. CAMERA AND CABLING.
	FUTURE WALL MOUNTED PROXIMITY CARD READER (46" MH UNLESS NOTED OTHERWISE). PROVIDE 1-GANG BOX WITH CONDUIT TO COMMON SMS JUNCTION BOX ABOVE ACCESSIBLE CEILING.
	ELEVATOR CAB MOUNTED CARD READER. READER TO BE INSTALLED IN ELEVATOR CAB AS COORDINATED WITH ELEVATOR CONTRACTOR. WIRING FROM CAB THRU TRAVELING CABLE TO ELEVATOR CONTROLLER IN ELEVATOR MACHINE ROOM AND INTERFACE WITH ELEVATOR CONTROLLER AND SMS. COORDINATE WITH ELEVATOR CONTRACTOR. REFER TO SECURITY ROUGH-IN DETAILS.
	LOCAL IP BASED 2-DOOR ACCESS CONTROL PANEL SERVING LOCAL CARD READER/SECURITY CONTROLLED DOORS. LOCATE ABOVE ADJACENT ACCESSIBLE CEILING. PROVIDE DATA DROP IN 0.75" CONDUIT TO LOCAL DATA CLOUSE. EXTEND 1" CONDUIT WITH DOOR SECURITY WIRING TO LOCAL SECURITY SYSTEM JUNCTION BOX. REFER TO SECURITY ROUGH-IN DETAILS FOR WORK.
	FUTURE DOOR POSITION SWITCH. PROVIDE CONDUIT PATHWAYS FROM DOOR FRAME TO COMMON SMS JUNCTION BOX ABOVE ACCESSIBLE CEILING.
	ELECTRONIC DOOR LOCK AND INSTALLATION BY OTHERS. LOW VOLTAGE WIRING. CONDUIT PATHWAYS FROM DOOR FRAME TO COMMON SMS JUNCTION BOX ABOVE ACCESSIBLE CEILING. REFER TO SECURITY ROUGH-IN DETAILS.
	ELECTRONIC MAG LOCK AND INSTALLATION BY OTHERS. LOW VOLTAGE WIRING. CONDUIT PATHWAYS FROM DOOR FRAME TO COMMON SMS JUNCTION BOX ABOVE ACCESSIBLE CEILING. REFER TO SECURITY ROUGH-IN DETAILS.
	FUTURE ELECTRONIC STRIKE. PROVIDE CONDUIT PATHWAYS FROM DOOR FRAME TO COMMON SMS JUNCTION BOX ABOVE ACCESSIBLE CEILING.
	WALL PEDESTAL MOUNT HANDICAP DOOR ACTUATOR BUTTON. FURNISHED BY OTHERS. BOX AS REQUIRED BY SYSTEM MANUFACTURER WITH INSTALLATION AND CONDUIT TO COMMON SMS JUNCTION BOX ABOVE ACCESSIBLE CEILING. ALL LOW VOLTAGE WIRING AND INTERFACE WITH SMS AND DOOR MOTOR. REFER TO SECURITY ROUGH-IN DETAILS.
	HANDICAP DOOR OPERATOR MOTOR ASSEMBLY BY OTHERS. 120V POWER CONNECTION AND CONDUIT FROM DOOR FRAME TO COMMON SMS JUNCTION BOX ABOVE ACCESSIBLE CEILING. LOW VOLTAGE WIRING AND INTERFACE WITH SMS AND DOOR ACTUATOR BUTTONS. REFER TO SECURITY ROUGH-IN DETAILS.
	WALL MOUNTED INTERCOM DOOR STATION (46" MH UNLESS NOTED OTHERWISE). 1-GANG BOX WITH 0.75" CONDUIT TO ABOVE ACCESSIBLE CEILING. INTERCOM AND CABLING.
	SECURITY SYSTEM JUNCTION BOX TO BE LOCATED ABOVE ACCESSIBLE CEILING (MIN 6"x6"x4"). ROUTE LOCAL DOOR SECURITY WIRING CONDUITS/RACEWAYS TO JUNCTION BOX. EXTEND 1" CONDUIT WITH DOOR SECURITY WIRING TO LOCAL 2-DOOR CONTROL PANEL/REMOTE DOOR CONTROL PANEL AS INDICATED ON DRAWINGS. REFER TO SECURITY ROUGH-IN DETAILS FOR WORK.
	WALL MOUNTED SECURITY KEYPAD ENTRY STATION (46" MH UNLESS NOTED OTHERWISE). 1-GANG BOX WITH 0.75" CONDUIT TO COMMON SMS JUNCTION BOX ABOVE ACCESSIBLE CEILING. KEYPAD AND CABLING.
	WALL MOUNTED COMBINATION KEYPAD/CARD READER (46" MH UNLESS NOTED OTHERWISE). 2-GANG BOX WITH 0.75" CONDUIT TO COMMON SMS JUNCTION BOX ABOVE ACCESSIBLE CEILING. DEVICE AND CABLING.
	CEILING MOUNTED MOTION DETECTOR. 1-GANG BOX MOUNTED IN CEILING. DETECTOR AND CABLING.
	WALL MOUNTED MOTION DETECTOR (90" MH UNLESS NOTED OTHERWISE). 1-GANG BOX WITH 0.75" CONDUIT TO ABOVE ACCESSIBLE CEILING. MOTION DETECTOR, WALL MOUNT HARDWARE, AND CABLING.
	WALL MOUNTED PUSH BUTTON FOR LOCAL ELECTRONIC DOOR RELEASE (46" MH UNLESS NOTED OTHERWISE). 1-GANG BOX WITH 0.75" CONDUIT TO ABOVE ACCESSIBLE CEILING. BUTTON AND CABLING.
	WALL MOUNTED PANIC/DURESS BUTTON (46" MH UNLESS NOTED OTHERWISE). 1-GANG BOX WITH 0.75" CONDUIT TO ABOVE ACCESSIBLE CEILING. BUTTON AND CABLING.
	LOCAL LOW VOLTAGE POWER SUPPLY FOR EXTERIOR CAMERA. SUBSCRIPT "X" INDICATES ASSOCIATED CAMERA. 120V POWER INTO LOCAL JUNCTION BOX ABOVE CEILING AND CONNECTION TO POWER SUPPLY. POWER SUPPLY MOUNTED ABOVE CEILING AND LOW VOLTAGE WIRING TO LOCAL CAMERA.
	FUTURE WALL MOUNTED REQUEST TO EXIT PRE DETECTOR. PROVIDE CONDUIT PATHWAYS FROM DOOR FRAME TO COMMON SMS JUNCTION BOX ABOVE ACCESSIBLE CEILING.
	WALL MOUNTED SECURITY SYSTEM WIRING OUTLET MOUNTED BELOW COUNTER TOP. 2-GANG BOX WITH 2-1" CONDUITS TO COMMON SMS JUNCTION BOX ABOVE ACCESSIBLE CEILING. GROMMETED FACEPLATE AND SECURITY SYSTEM CABLING.


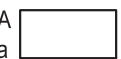







ELECTRICAL SYMBOLS

	DASH SYMBOL INDICATES PARTICULAR OUTLET OR DEVICE TO BE REMOVED AND CIRCUITRY MADE CONTINUOUS WHERE REQUIRED.
	EXISTING OUTLET OR DEVICE TO REMAIN. MAINTAIN EXISTING CIRCUITING.
	ELECTRICAL CONNECTION.
	20A-125V DUPLEX RECEPTACLE, NEMA 5-20R (18" MH UNLESS NOTED OTHERWISE).
	20A-125V SINGLE RECEPTACLE, NEMA 5-20R (18" MH UNLESS NOTED OTHERWISE).
	SPECIAL PURPOSE RECEPTACLE. REFER TO NOTE ON PLAN.
	20A-125V DOUBLE DUPLEX RECEPTACLE, NEMA 5-20R (18" MH UNLESS NOTED OTHERWISE) TWO GANG ASSEMBLY.
	20A-125V DUPLEX RECEPTACLE, NEMA 5-20R WITH BOTTOM OUTLET CONTROLLED BY WALL SWITCH (18" MH UNLESS NOTED OTHERWISE).
	20A-125V DUPLEX RECEPTACLE, NEMA 5-20R (46" MH UNLESS NOTED OTHERWISE).
	20A-125V DUPLEX RECEPTACLE, NEMA 5-20R. WITH GROUND FAULT CIRCUIT INTERRUPTER (18" MH UNLESS NOTED OTHERWISE).
	20A-125V WEATHERPROOF DUPLEX RECEPTACLE, NEMA 5-20R (HORIZONTAL 18" MH UNLESS NOTED OTHERWISE) WITH WEATHERPROOF COVER. VERTICAL MOUNT.
	20A-125V WEATHERPROOF DUPLEX RECEPTACLE, NEMA 5-20R WITH GROUND FAULT CIRCUIT INTERRUPTER (18" MH UNLESS NOTED OTHERWISE) WITH WEATHERPROOF COVER. VERTICAL MOUNT.
	20A-125V DUPLEX RECEPTACLE, NEMA 5-20R. ON EMERGENCY POWER (18" MH UNLESS NOTED OTHERWISE).
	20A-125V POWERLOCK GROUNDING TYPE RECEPTACLE, HOSPITAL USE (86" MH UNLESS NOTED OTHERWISE).
	20A-125V DUPLEX PEDESTAL TYPE FLOOR RECEPTACLE. PROVIDE CARPET FLANGE WHERE REQUIRED.
	20A-125V DUPLEX RECEPTACLE IN FLOOR BOX. PROVIDE CARPET FLANGE WHERE REQUIRED.
	20-125V DUPLEX RECEPTACLE, NEMA 5-20R, WITH ISOLATED GROUND (18" MH UNLESS NOTED OTHERWISE).
	20A-125250V-1PH-4W SINGLE RECEPTACLE, NEMA 14-20R (18" MH UNLESS NOTED OTHERWISE).
	30A-125250V-1PH-4W SINGLE RECEPTACLE, NEMA 14-30R (18" MH UNLESS NOTED OTHERWISE).
	50A-125250V-1PH-4W SINGLE RECEPTACLE, NEMA 14-50R (18" MH UNLESS NOTED OTHERWISE).
	20A-250V-3PH-4W SINGLE RECEPTACLE, NEMA 15-20R (18" MH UNLESS NOTED OTHERWISE).
	30A-250V-3PH-4W SINGLE RECEPTACLE, NEMA 15-30R (18" MH UNLESS NOTED OTHERWISE).
	50A-250V-3PH-4W SINGLE RECEPTACLE, NEMA 15-50R (18" MH UNLESS NOTED OTHERWISE).
	JUNCTION BOX.
	MULTI-OUTLET RECEPTACLES ASSEMBLY, NEMA 5-15R (SINGLE OUTLETS ON 18" CENTERS) (46" MH UNLESS NOTED OTHERWISE).
	CLOCK HANGER OUTLET, SINGLE NEMA 5-15R RECESSED IN COVER PLATE (84" MH UNLESS NOTED OTHERWISE).
	SINGLE POLE SWITCH (46" MH UNLESS NOTED OTHERWISE).
	TWO POLE WALL SWITCH (46" MH UNLESS NOTED OTHERWISE).
	THREE-WAY WALL SWITCH (46" MH UNLESS NOTED OTHERWISE).
	FOUR-WAY WALL SWITCH (46" MH UNLESS NOTED OTHERWISE).
	SWITCH WITH NEON PILOT LIGHT. ONE-GANG ASSEMBLY (46" MH UNLESS NOTED OTHERWISE).
	KEY OPERATED WALL SWITCH (46" MH UNLESS NOTED OTHERWISE).
	LOW-VOLTAGE MOMENTARY WALL SWITCH (46" MH UNLESS NOTED OTHERWISE).
	LIGHTING DIMMER SWITCH (46" MH UNLESS NOTED OTHERWISE) 1000 WATTS UNLESS OTHERWISE INDICATED.
	SWITCH WITH RECEPTACLE (46" MH UNLESS NOTED OTHERWISE) STANDARD TWO-GANG ASSEMBLY OF SWITCH AND RECEPTACLE.
	FLUSH FRACTIONAL HORSEPOWER MOTOR STARTER WITH NEON PILOT LIGHT. ONE-GANG ASSEMBLY (46" MH UNLESS NOTED OTHERWISE).
	HP RATED WALL SWITCH (46" MH UNLESS NOTED OTHERWISE).
	ELECTRICAL PANEL OR SWITCHBOARD PER DRAWINGS.
	PULL BOX.
	DISCONNECT SWITCH.
	FUSED DISCONNECT SWITCH.
	MOTOR STARTER.
	COMBINATION MOTOR STARTER AND DISCONNECT SWITCH.
	ELECTRIC MOTOR.
	UNIT HEATER.
	FAN COIL.
	AIR CONDITIONER.
	CONDENSING UNIT.
	UNIT VENTILATOR.
	CORD REEL.
	POWER POLE.
	LINE VOLTAGE THERMOSTAT.
	DUCT HEATER.
	ELECTRIC BASEBOARD HEATER.
	INTERCOM SYSTEM DESK MOUNTED MASTER CONTROL STATION. SUBSCRIPT "W" INDICATES WALL MOUNT (46" MH UNLESS NOTED OTHERWISE).
	INTERCOM STAFF STATION (46" MH UNLESS NOTED OTHERWISE).
	INTERCOM HORN TYPE SPEAKER (84" MH UNLESS NOTED OTHERWISE).
	INTERCOM SPEAKER FLUSH MOUNT IN CEILING.
	PUSHBUTTON (46" MH UNLESS NOTED OTHERWISE).
	BUZZER (90" MH UNLESS NOTED OTHERWISE).
	4" DIAMETER BELL (90" MH UNLESS NOTED OTHERWISE).
	ELAPSED TIME INDICATOR CLOCK (90" MH UNLESS NOTED OTHERWISE) WITH RESET SWITCH (46" MH UNLESS NOTED OTHERWISE).





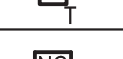

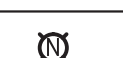
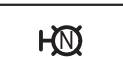





FIRE ALARM SYMBOLS

	FIRE ALARM CONTROL PANEL.
	FIRE ALARM SPEAKER & SIGNAL LIGHT (80" AFF). IF WHEN SHOWN INDICATES CANDELA RATING OF STROBE. WHEN A # IS NOT SHOWN, THE STROBE SHALL BE RATED 75 CANDELA.
	FIRE ALARM BELL & SIGNAL LIGHT (80" AFF). IF WHEN SHOWN INDICATES CANDELA RATING OF STROBE. WHEN A # IS NOT SHOWN, THE STROBE SHALL BE RATED 75 CANDELA.
	FIRE ALARM CHIME & SIGNAL LIGHT (80" AFF). IF WHEN SHOWN INDICATES CANDELA RATING OF STROBE. WHEN A # IS NOT SHOWN, THE STROBE SHALL BE RATED 75 CANDELA.
	FIRE ALARM HORN & SIGNAL LIGHT (80" AFF). IF WHEN SHOWN INDICATES CANDELA RATING OF STROBE. WHEN A # IS NOT SHOWN, THE STROBE SHALL BE RATED 75 CANDELA.
	FIRE ALARM SIGNALING LIGHT (80" AFF). IF WHEN SHOWN INDICATES CANDELA RATING OF STROBE. WHEN A # IS NOT SHOWN, THE STROBE SHALL BE RATED 75 CANDELA.
	CEILING MOUNTED FIRE ALARM SPEAKER.
	FIRE ALARM MANJAL STATION (46" MH UNLESS NOTED OTHERWISE). SUBSCRIPT "K" INDICATES KEY OPERATED.
	CEILING MOUNTED SMOKE DETECTOR.
	CEILING MOUNTED HEAT DETECTOR.
	DUCT MOUNTED SMOKE DETECTOR. SUBSCRIPT "S" INDICATES SUPPLY. SUBSCRIPT "R" INDICATES RETURN.
	DUCT MOUNTED HEAT DETECTOR. SUBSCRIPT "S" INDICATES SUPPLY. SUBSCRIPT "R" INDICATES RETURN.
	ELECTRIC RELEASE DOOR CLOSER.
	ELECTRO-MAGNETIC DOOR HOLDER.
	WATER FLOW SWITCH.
	VALVE SUPERVISORY SWITCH.
	DUCT MOUNTED DETECTOR REMOTE TEST STATION AND ALARM INDICATOR LIGHT. SUBSCRIPT "W" INDICATES WALL MOUNTED.
	SMOKE DAMPER.
	FIRE FIGHTER'S TELEPHONE (60" MH UNLESS NOTED OTHERWISE).
	PRESSURE SWITCH.
	ADDRESSABLE MODULE. SUBSCRIPT "I" INDICATES INPUT. SUBSCRIPT "C" INDICATES CONTROL.
	POST INDICATOR VALVE.
	KNOX BOX.

LUMINAIRE SYMBOLS

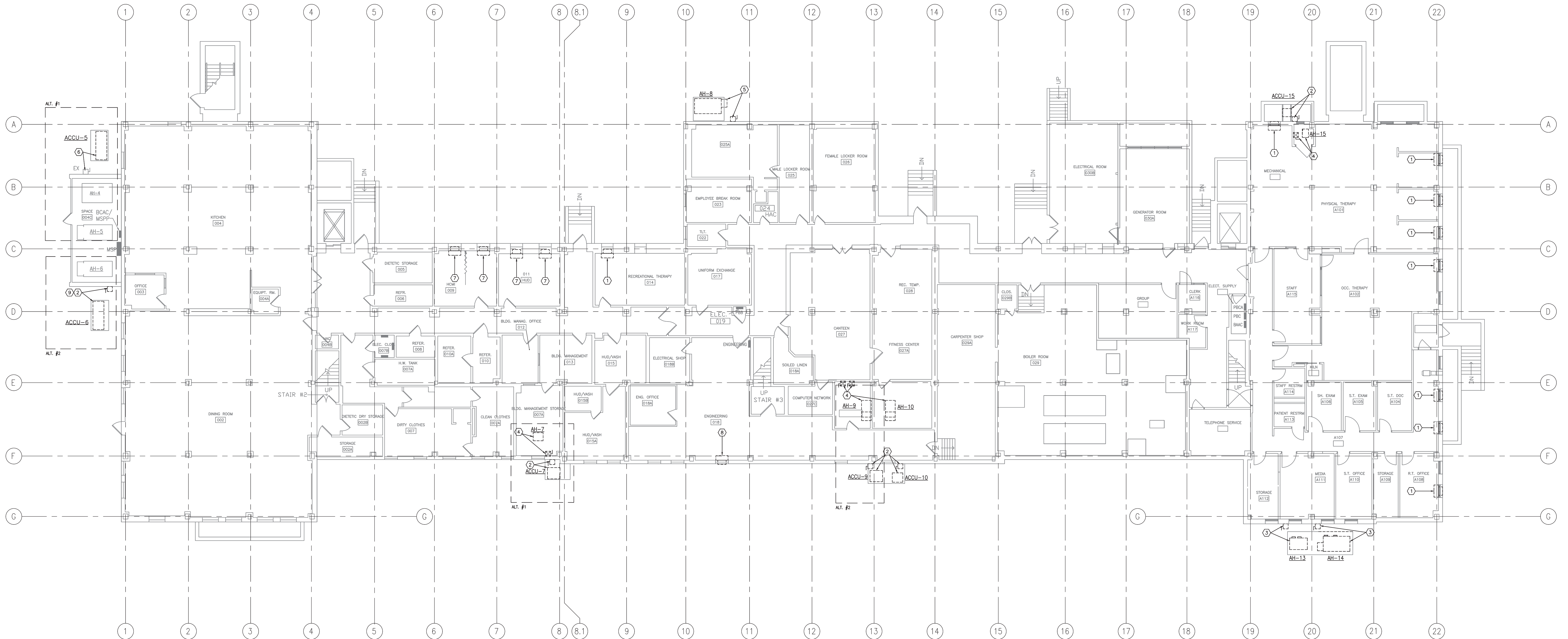
			LIGHTING FIXTURE. CAPITAL LETTER DENOTES FIXTURE TYPE. LOWER CASE LETTER DENOTES SWITCHING ARRANGEMENT.
			LIGHTING FIXTURE ON NIGHT LIGHT OR EMERGENCY CIRCUIT.
			EXIT LIGHTING FIXTURE, ARROWS AS INDICATED.

NURSE CALL SYMBOLS

	NURSE CALL CONTROL PANEL.
	NURSE CALL DESK MOUNTED MASTER CONTROL STATION (OUTLET AT 18" MH UNLESS NOTED OTHERWISE). SUBSCRIPT "W" INDICATES WALL MOUNT (46" MH UNLESS NOTED OTHERWISE).
	NURSE CALL STAFF STATION (46" MH UNLESS NOTED OTHERWISE).
	NURSE CALL DUTY STATION (46" MH UNLESS NOTED OTHERWISE).
	NURSE CALL STATION WITH PULL CORD FOR PATIENT USE (33" MH IN TOILET ROOMS, 90" M.H. IN SHOWERS AND WET AREAS, 46" MH UNLESS NOTED OTHERWISE IN ALL OTHER AREAS).
	PATIENT NURSE CALL UTILITY CONSOLE (46" MH UNLESS NOTED OTHERWISE).
	PATIENT NURSE CALL STATION (ONE OR TWO CORDS AS INDICATED, 46" MH UNLESS NOTED OTHERWISE).
	CEILING MOUNTED NURSE CALL DOME LIGHT.
	WALL MOUNTED NURSE CALL DOME LIGHT (90" MH UNLESS NOTED OTHERWISE).
	CEILING MOUNTED COMBINATION DOME LIGHT AND BUZZER.
	CEILING MOUNTED NURSE CALL ZONE LIGHT.
	NURSE CALL EMERGENCY BUTTON (46" MH UNLESS NOTED OTHERWISE).
	EMERGENCY CODE BLUE BUTTON (46" MH UNLESS NOTED OTHERWISE).

ABBREVIATIONS

ALP	- AREA ALARM PANEL - MEDICAL GAS	ID	- INSIDE DIAMETER
AC	- ACCESS	IN	- INCHES
ADJ	- ADJUSTABLE	KEC	- KITCHEN EQUIPMENT CONTRACTOR
AFI	- ARC FAULT CIRCUIT INTERRUPTER		
AFCI	- ARC FAULT CIRCUIT INTERRUPTER		
AFF	- ABOVE FINISHED FLOOR TO BOTTOM OF ITEM	L	- LENGTH
AFG	- ABOVE FINISHED GRADE TO BOTTOM OF ITEM	LBS	- POUNDS
ALT	- ALTERNATE		
AP	- ACCESS PANEL	MAP	- MASTER ALARM PANEL (MEDICAL GAS)
APPROX	- APPROXIMATE	MAX	- MAXIMUM
ARCH	- ARCHITECT OR ARCHITECTURAL	MEZZ	- MEZZANINE
ASSY	- ASSEMBLY	MFR	- MANUFACTURER
ATS	- AUTOMATIC TRANSFER SWITCH	MH	- MANHOLE OR MOUNTING HEIGHT TO CENTER LINE OF ITEM
		MIN	- MINIMUM OR MINUTE
BLDG	- BUILDING	MISC	- MISCELLANEOUS
BOE	- BOTTOM OF EQUIPMENT	MTD	- MOUNTED
BOT	- BOTTOM	MTG	- MOUNTING
BTWN	- BETWEEN		
		NIC	- NOT IN CONTRACT
CFCI	- CONTRACTOR FURNISHED CONTRACTOR INSTALLED	NOM	- NOMINAL
CIR	- CIRCUIT	NTS	- NOT TO SCALE
CLG	- CEILING		
CMU	- CONCRETE MASONRY UNIT	OD	- OUTSIDE DIAMETER
CONN	- CONNECT OR CONNECTION	OFCI	- OWNER FURNISHED CONTRACTOR INSTALLED
CONTR	- CONTRACTOR	OFOW	- OWNER FURNISHED OWNER INSTALLED
CORR	- CORRIDOR		
CTR	- CENTER	PC	- PLUMBING CONTRACTOR (DIVISION 22)
		PLBG	- PLUMBING
D	- DEPTH		
DET	- DETAIL	RAD	- RADIUS
DIA	- DIAMETER	REC	- RECESSED
DM	- DIMENSION	REQD	- REQUIRED
DIV	- DIVISION	RI	- ROUGH-IN
DN	- DOWN		
DWG	- DRAWING	S	- SURFACE MOUNTED
EA	- EACH	SC	- SECURITY CONTRACTOR
EC	- ELECTRICAL CONTRACTOR (DIVISION 26)	SCHT	- SCHEDULE
EJ	- EXPANSION JOINT	SHT	- SHEET
ELEC	- ELECTRICAL	SMS	- SECURITY MANAGEMENT SYSTEM



BASEMENT ELECTRICAL PLAN - DEMOLITION
SCALE: 1/8" = 1'-0"

GENERAL NOTES

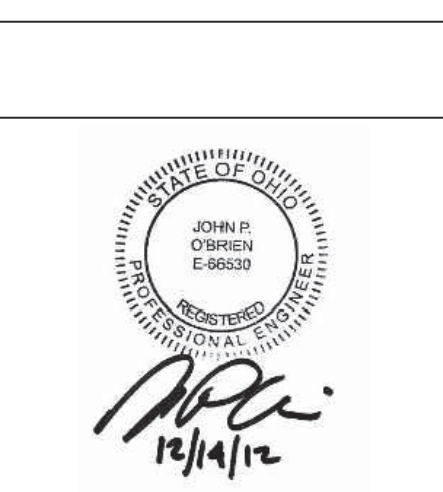
- MAINTAIN ALL POWER CIRCUITS FOR NEW WORK (WHERE INDICATED OR REQUIRED).
- REMOVE ALL ACCESSIBLE ABANDONED WIRING OF ALL TYPES, OR CAP AND LABEL IN JUNCTION BOX FOR RE-USE, IN COMPLIANCE WITH THE NATIONAL ELECTRIC CODE.
- MAINTAIN AND RESTORE, IF INTERRUPTED, ALL CONDUITS AND CONDUCTORS PASSING THROUGH RENOVATED AREAS AND SERVICING UNDISTURBED AREAS.
- REMOVE ALL LIGHTING FIXTURES, WIRING DEVICES, DATA OUTLETS, FIRE ALARM, CONDUIT, WIRE, ETC. AS REQUIRED TO ACCOMMODATE NEW WORK. NOT ALL ITEMS NECESSARILY SHOWN.
- DEDUCT #1: ACCU-5, ACCU-7 AND AHU-7 SHALL NOT BE IN THE SCOPE OF WORK.
- DEDUCT #2: ACCU-5, ACCU-6, ACCU-7, AHU-7, ACCU-9 AND AHU-9 SHALL NOT BE IN THE SCOPE OF WORK.

NOTES

- PTAC TO BE REMOVED. DISCONNECT ELECTRICAL CONNECTION AND MAINTAIN WIRE AND CONDUIT FOR THE INSTALLATION OF NEW PTAC.
- ACCU TO BE REMOVED. DISCONNECT ELECTRICAL CONNECTION AND REMOVE SAFETY SWITCH. MAINTAIN WIRE AND CONDUIT FOR THE INSTALLATION OF NEW ACCU AND NEW SAFETY SWITCH.
- AHU TO BE REMOVED. REMOVE SAFETY SWITCH WIRING AND CONDUIT BACK TO PANEL "BAAC".
- FAN COIL UNIT TO BE REMOVED. REMOVE SAFETY SWITCH AND MOTOR STARTER. MAINTAIN WIRE AND CONDUIT FOR THE INSTALLATION OF NEW FAN COIL UNIT.
- AHU SHALL BE REMOVED. REMOVE SAFETY SWITCH WIRING AND CONDUIT BACK TO PANEL "MSP".
- DEDUCT ALTERNATE #1: ACCU TO BE REMOVED. DISCONNECT ELECTRICAL CONNECTION. REUSE EXISTING 3P-100A SAFETY SWITCH AND MAINTAIN WIRE AND CONDUIT FOR THE INSTALLATION OF NEW ACCU.
- PTAC WITH CORD AND PLUG CONNECTION TO BE REMOVED. EXISTING TYPE 6-20R RECEPTACLE SHALL BE UTILIZED FOR REPLACEMENT UNIT.
- PTAC WITH CORD AND PLUG CONNECTION TO BE REMOVED. EXISTING TYPE 5-20R RECEPTACLE SHALL BE UTILIZED FOR REPLACEMENT UNIT.
- DEDUCT ALTERNATE #2.

100% CONSTRUCTION DOCUMENTS	12/14/2012
Revisions	Date

CONSULTANTS:



ARCHITECT/ENGINEERS:
Heapy Engineering Mechanical Electrical Commissioning Technology Nationally Recognized Leader in Sustainability / LEED 1400 W Dorothy Lane, Dayton OH 45409-1310 Ph: 937-224-0861 Fax: 937-224-5777 www.heapy.com PROJECT NO. 2012-04031 FIRM LICENSE: 01528

Drawing Title
BASEMENT ELECTRICAL PLAN - DEMOLITION
Approved Project Director

Project Title
CVAMC REPLACE HEAT PUMPS AND OTHER A/C UNITS AT FTD
Location
FT. THOMAS KY
Date
12/14/12
Checked
MSG
Drawn
DLJ

Project Number
539-13-109
Building Number
64
Drawing Number
64-E2
Dwg. 7 of 8

Office of Construction and Facilities Management
Department of Veterans Affairs

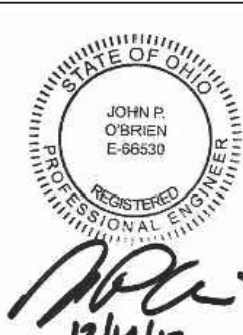


MOTORS, STARTERS, DISCONNECTS & CONTROLS																												
PANEL & CIRCUIT		MOTOR				STARTER						DISCONNECT MEANS				CONTROL			FEEDER									
		NAMEPLATE	CHARACTERISTICS			LOCATION	NEMA SIZE	TYPE						TYPE		LOCATION		SEE NOTE	FURNISHED BY MOTOR MFG. OR BY E.C. AT STARTER	E.C. WITH EQUIPMENT	BY H.C.	SEE NOTE	NUMBER OF WIRS	WIRE SIZE	CONDUIT SIZE	SEE NOTE		
			HP (KVA OR FLA)	208V-1PH	208V-3PH			120V-1PH	480V-1PH	480V-3PH	MANUAL	MAGNETIC	STARTER	2 SPEED	FLA	FUSE SIZE	VFD										SEE NOTE	NEAR MOTOR
ENGINEERING USE EX OCT	BAH-7	1.5	●			STORAGE RM 013A	0	●	●				●			00/26	●						EC	●	3	12	12	.75
ENGINEERING USE EX OCT	BAH-8	59.9A	●			WEST SIDE OF BUILDING		●	●				●			00/26	●					EC	●	3	3	8	1.25	
ENGINEERING USE EX OCT	BAH-9	1.5	●			RM 027B	0	●	●				●			00/26	●					1 EC	●	3	12	12	.75	
ENGINEERING USE EX OCT	BAH-10	1	●			RM 028B	0	●	●				●			00/26	●					1 EC	●	3	12	12	.75	
ENGINEERING USE EX OCT	BAH-11	56.9A	●			EAST SIDE OF BUILDING		●	●				●			00/26	●					EC	●	3	4	8	1.25	
ENGINEERING USE EX OCT	BAH-12	59.9A	●			EAST SIDE OF BUILDING		●	●				●			00/26	●					EC	●	3	3	8	1.25	
ENGINEERING USE EX OCT	BAH-15	0.33	●			WEST SIDE OF BUILDING	0	●	●				●			00/26	●					EC	●	2	12	12	.75	
ENGINEERING USE EX OCT	ACCU-5	21.6KVA	●			SOUTH SIDE OF BUILDING							●			00/26	●					EC	●	3	3	8	1.25	
ENGINEERING USE EX OCT	ACCU-6	21.6KVA	●			SOUTH SIDE OF BUILDING							●			00/26	●					EC	●	3	3	8	1.25	
ENGINEERING USE EX OCT	ACCU-7	5.3KVA	●			EAST SIDE OF BUILDING							●			00/26	●					EC	●	2	12	12	.75	
ENGINEERING USE EX OCT	ACCU-9	5.3KVA	●			EAST SIDE OF BUILDING							●			00/26	●					2 EC	●	2	8	10	.75	
ENGINEERING USE EX OCT	ACCU-10	5.5KVA	●			EAST SIDE OF BUILDING							●			00/26	●					3 EC	●	2	8	10	.75	
ENGINEERING USE EX OCT	ACCU-15	2.4KVA	●			WEST SIDE OF BUILDING							●			00/26	●					●	●	2	10	10	.75	

	HARD WIRE NEW PTAC TO EXISTING CIRCUIT MAINTAINED FROM DEMOLITION WORK. EXTEND WIRING AND CONDUIT AS REQUIRED FOR A COMPLETE INSTALLATION.	10	CONNECT NEW AHU VIA NEW COMBINATION STARTER. REUSE EXISTING CIRCUIT MADE AVAILABLE FROM DEMOLITION WORK. EXTEND WIRING AND CONDUIT AS REQUIRED. CHANGE EXISTING 3P-40A BREAKER (SIEMENS TYPE HBL) FEEDING AH-7 TO 3P-20A (PANEL "ENGINEERING" POLES 1,3,5). SEE MOTOR SCHEDULE THIS SHEET FOR ADDITIONAL INFORMATION.
2	SINGLE POINT CONNECTION FOR AHU. PROVIDE NEW CONDUCTORS AND CONDUIT BACK TO PANEL "BAC". CHANGE EXISTING 3P-30A BREAKER (SIEMENS PE HBL) ORIGINALLY FEEDING AH-13 TO 3P-70A (POLES 2,4,6). SEE MOTOR SCHEDULE THIS SHEET FOR ADDITIONAL INFORMATION.	11	SINGLE POINT CONNECTION FOR AHU. PROVIDE NEW CONDUCTORS AND CONDUIT BACK TO PANEL "BAC". CHANGE EXISTING 3P-30A BREAKER (SIEMENS TYPE HBL) ORIGINALLY FEEDING AH-14 TO 3P-70A (POLES 8,10,12). SEE MOTOR SCHEDULE THIS SHEET FOR ADDITIONAL INFORMATION.
3	NEW NEMA 3R SAFETY SWITCH.	12	SINGLE POINT CONNECTION FOR AHU. PROVIDE NEW CONDUCTORS AND CONDUIT BACK TO PANEL "BAC/MSP" USING EXISTING CONDUIT. REROUTE CONDUIT FROM PANEL "MSP" AND LAND INTO ADJACENT PANEL "BAC/MSP". PROVIDE NEW 3P-80A BREAKER (SIEMENS TYPE HBL) AT POLES 11,13,15. SEE MOTOR SCHEDULE THIS SHEET FOR ADDITIONAL INFORMATION.
4	CONNECT NEW ACCU AND NEW NEMA 3R SAFETY SWITCH TO EXISTING CIRCUIT MAINTAINED FROM DEMOLITION WORK. EXTEND WIRING AND CONDUIT AS REQUIRED FOR A COMPLETE INSTALLATION. SEE MOTOR SCHEDULE THIS SHEET FOR ADDITIONAL INFORMATION.	13	CONNECT TO CIRCUIT ENGINEERING-11 USING 2#12,#12G.75". PROVIDE 1P-20A BREAKER.
5	AHU'S AND ACCU'S INDICATED ARE TAPPED OFF AN EXISTING 3P-100A FEEDER FROM PANEL "PBB" (POLES 37,39,41). FIELD VERIFY TAP LOCATION. REUSE WIRE AND CONDUIT AND PROVIDE FUSING AS INDICATED IN MOTOR SCHEDULE THIS SHEET.	14	CONNECT TO CIRCUIT BCAC/MSP-11 USING 2#12,#12G.75".
6	CONNECT NEW AHU VIA NEW COMBINATION MOTOR STARTER. REUSE EXISTING CIRCUIT MAINTAINED FROM DEMOLITION WORK. EXTEND WIRING AND CONDUIT AS REQUIRED. SEE MOTOR SCHEDULE THIS SHEET FOR ADDITIONAL INFORMATION.	15	CONNECT TO CIRCUIT PBB-28 USING 2#12,#12G.75". PROVIDE 1P-20A BREAKER.
7	CONNECT NEW ACCU TO EXISTING SAFETY SWITCH AND TO EXISTING CIRCUIT MAINTAINED FROM DEMOLITION WORK. EXTEND WIRING AND CONDUIT AS REQUIRED FOR A COMPLETE INSTALLATION. SEE MOTOR SCHEDULE THIS SHEET FOR ADDITIONAL INFORMATION.	16	CONNECT TO CIRCUIT BCAC-12 USING 2#12,#12G.75".
8	UTILIZE EXISTING 6-20R FOR NEW PTAC CORD AND PLUG CONNECTION.	17	CONNECT NEW AHU VIA NEW COMBINATION STARTER. REUSE EXISTING CIRCUIT MAINTAINED FROM DEMOLITION WORK. EXTEND WIRING AND CONDUIT AS REQUIRED. CHANGE EXISTING 2P-20A BREAKER (SIEMENS TYPE HBL) FEEDING AH-15 TO 2P-15A (PANEL "BAC" POLES 1,3). SEE MOTOR SCHEDULE THIS SHEET FOR ADDITIONAL INFORMATION.
9	UTILIZE EXISTING 5-20R FOR NEW PTAC CORD AND PLUG CONNECTION.	18	CONNECT NEW ACCU VIA NEW SAFETY SWITCH. REUSE EXISTING CIRCUIT MADE AVAILABLE FROM DEMOLITION WORK. EXTEND WIRING AND CONDUIT AS REQUIRED. CHANGE EXISTING 2P-30A BREAKER (SIEMENS TYPE HBL) FEEDING ACCU-15 TO 2P-25A (PANEL "BAC" POLES 35,37). SEE MOTOR SCHEDULE THIS SHEET FOR ADDITIONAL INFORMATION.

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Revisions:	Date

CONSULTANTS:



ARCHITECT/ENGINEERS:



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PROJECT NO. 2012-04031 FIRM LICENSE: 01528

Drawing Title
BASEMENT ELECTRICAL FLOOR PLAN

Approved: Project Director

Project Title
CVAMC REPLACE HEAT
PUMPS AND OTHER A/C UNITS
AT FTD

Location	FT. THOMAS
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Date
12/14/12

KY

Checked	Drawn
MSG	DLJ

Project Number
539-13-109

Building Number
64

Drawing Number

64-E3

Dwg 8 of 8

Office of
Construction
and Facilities
Management

